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Amani K. Hamdan Alghamdi

University of Dammam, amanihamdan2004@yahoo.ca

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Pre-service Teachers' Preferred Methods of Assessment: A Perspective from Saudi Arabia

Amani Hamdan
University of Damman
Saudi Arabia

Abstract: Teacher-candidate course assessment is one topic that has not been adequately explored in teacher education literature where pre-service teachers' voices are rarely heard. This mixed-methods study explored a group of female pre-service teachers (n = 83) enrolled in a Diploma of Education program to identify their preferred method of assessment for their learning. The results showed that these individuals preferred a group assignment, consisting of a written report and an oral presentation, over an individual assignment, consisting of an individual essay, because the group assignment helped them to break through the boundary of facing an audience and encouraged them to exchange knowledge with their counterparts.

Introduction

Previous educational reforms in Saudi Arabia have focused on specific parts of the education system without consideration of the overall system, and curriculum reforms have focused on establishing contemporary and important goals and learning resources without similar attention being given to instruction (i.e., teaching and assessment). Contemporary interpretations of learning and teaching have placed renewed emphasis on assessment as compared to evaluation (United States National Research Council [NRC], 2000). According to Ramsden (2003),

Assessment plays a critical role in determining the quality of students' learning ... assessment is fundamentally about learning ... [I]t is about reporting on students' achievements and about teaching them better through expressing to them the goals of our curricula ... it is about diagnosing misunderstandings in order to help students to learn more effectively. (p. 177)

Beliefs about the assessment of practicing and future teachers influence their choices and use of assessment in their classroom instruction (Alghamdi Hamdan, 2012). Ucar (2012) suggested that students in teacher-education programs have beliefs about teaching and assessment based on their prior experiences as students and that these beliefs serve as filters for their teacher-education experiences. In fact, various initiatives to make teacher preparation more assessment based and evidence driven exist (Cochran-Smith, 2003). Clearly, cyclic-proliferation instructional practices—new teachers teach their students as they were taught and assess their students as they were assessed—need to be broken.

The aim of this study was to investigate pre-service teachers' conceptions of group versus individual assessment experiences as a platform for determining their beliefs about assessment. Knowing about pre-service teachers' views of assessment and whether their views differ could have implications for how group and individual assessments are and can be used in teacher-education programs and implemented into their future teaching. The importance of this research is that it would be among the few studies that have considered pre-service teachers' preferred methods of assessment and, in particular, the preferred methods of pre-service teachers in Saudi Arabia where assessment has not received sufficient consideration in the literature and in recent educational reforms.

Saudi teachers have been encouraged to implement a major reform program in order to transform the teaching approach from a traditional one based on rote memorization into one that emphasizes critical thinking and problem solving. King Abdullah is leading the current reform movement in Saudi education; a project named *Tatweer* (Progress) recommends that students be made integral to and be actively engaged in multiple means of assessment (Tatweer Education Holding Company, 2012). This shift requires a fundamental change in the ways in which teachers view assessment and assess their students. Yet, in order for the new generation of teachers to achieve this transformation, they must overcome years of experience—as both a student and a teacher—in the traditional approach and must begin to practice the new methods while attending to and fulfilling the requirements of their pre-service teacher education programs. Some university teacher-education faculties have argued that “prospective teachers need opportunities to question, analyze and solve problems to develop the good judgment necessary to make effective classroom decisions” (Liebars, 1999, p. 131). Thus, this research is significant because it is one of only a few studies regarding the attitudes of female pre-service student teachers toward methods of assessment.

Literature Review

A review of Arabic and English international studies that have explored pre-service teachers and methods of assessment revealed that these studies focused on pre-service student teachers' attitudes toward one type of assessment, such as multiple-choice questions. These studies suggest that students appeared to prefer one type of assessment more than another.

International and Arabic Studies of Pre-service Teachers' Preferences

Two classic studies with an international context have provided a foundation for understanding teachers' preferences about assessment. McCloskey and Holland (1976) found that students appear to prefer multiple-choice questions over long oral and short written questions. Bridgeman (1992) confirmed those results after an examination of pre-service students' ($N = 321$) attitudes toward two types of tests, namely, multiple-choice and open-ended questions. The results indicated that 81% of respondents preferred multiple-choice questions and 11% preferred open-ended questions, while 8% reported no preference.

Liebars (1999) explored the feasibility of using journals and portfolios as alternative methods of assessment for pre-service teachers in the United States; she concluded that “If pre-service teachers are exposed to alternative assessments as students, they are more likely to adopt them as teachers” (p. 168). Kabilan and Khan (2012) explored the effects of Malaysian pre-

service teachers being assessed through the use of e-portfolios to document their learning; their study highlighted the benefits, challenges, and competencies that pre-service teachers gained as a result of using nontraditional assessment methods. Fletcher, Meyer, Anderson, Johnston, and Rees (2012) explored the assessment perceptions of New Zealand postsecondary students and faculty. They reported that faculty believed that assessment had a positive impact on student achievement and that, more specifically, it was trustworthy, consistent, and provided feedback to students. However, students suggested that, in general, the methods of assessment employed in higher education were irrelevant, sometimes unfair, and did not promote program and institutional accountability. When the research is focused on Arabic settings, the scope is very limited. Mahafzah (1999) compared the attitudes of pre-service teachers at Mutah University in Jordan toward taking midterm examinations versus writing research papers and reports; he concluded that pre-service teachers preferred writing research papers and reports to writing midterm examinations.

Yet, it seems that there are still an inadequate number of studies that explore pre-service teachers' attitudes toward the types of assessment-oriented assignments they are required to complete and whether they prefer individual or group assignments. It seems that many of the above studies focus on the traditional meaning of assessment without detailing the differences between formative and summative assessment, which will be discussed shortly.

Alternative Forms of Assessment

Zeidner and Bensoussan (1988) explored students' attitudes toward oral examinations in terms of whether they were favoured over written examinations in English as a foreign language. Their study examined the relationship between students' attitudes toward language tests and their levels of achievement. They concluded that students prefer written over oral examinations because they view written tests as being fairer, having more value, causing less stress, and being easier to understand than oral examinations. However, these students believed that oral examinations were more important than written tests for evaluating students' achievement of learning outcomes. In a similar study that compared students' performance on and attitudes toward oral and written assessments, Huxham, Campbell, and Westwood (2012) stated that "oral assessments may be more inclusive than written ones and that they can act as powerful tools in helping students to establish a 'professional identity'" (p. 125).

Carifio and Kermis (1990) considered pre-service and in-service teachers' views regarding examinations and other forms of evaluation in mathematics. The 923 teachers in their study were divided into two groups according to years of teaching experience. They found that the group with more experience was more positive toward alternative methods of assessment in mathematics than toward traditional examinations while those with less experience were less positive toward alternative assessments. The overall conclusion was that both groups had negative attitudes toward written examinations.

Research-based Principles for Assessment Design

Assessment works best when it is based on clear statements of purpose and goals for the course, expected achievement standards, and criteria of success (NRC, 2001; Newton, 2007). Assessment purposes vary from assessment of learning (accountability), assessment for learning

(formative), and assessment as learning (clarification and transfer). Traditional assessment emphasizes the accountability function for grading and sorting students based on their summative performance of achievement. Constructivist interpretations of learning stress formative assessment of learning that documents prior knowledge or ongoing performance to empower learning and inform instruction. Assessment as learning stresses the clarification of the desired performance and tasks that promote learning while providing performance indicators. Assessment criteria need to be understandable and explicit so that students understand the desired level of performance and expectations for each assessment they encounter. Teachers, students, parents, and the community should all be able to ascertain why a particular form of assessment is being used as well as the reasons for choosing each form of assessment in its particular context.

This means that the purposes of assessment must influence the design of the assessment tasks, their scoring procedures, and the feedback schedule of the results to students, teachers, and institutions. Black (1993, as cited in Ruiz-Primo & Furtak, 2007) emphasized that formative assessment of learning is essential to effective teaching and learning. Formative assessment involves gathering, interpreting, and acting on information about students' learning so that learning outcomes may be improved (Bell & Cowie, 2001). More specifically, the information gained through formative assessment should be used to modify teaching and learning activities in order to reduce the gap between desired and observed student performance; as well, the feedback needs to be timely (Bell & Cowie, 2001; Black & William, 1998; NRC, 1999; Ruiz-Primo & Furtak, 2007).

Valli and Rennert-Ariev (2002) suggested that there needs to be a shift from a testing culture to an assessment culture in which there are radically different conceptions of the human mind, learning, and the evaluation process that reflect the target learning and functions. Assessment should entail ongoing, constructive feedback; it is ongoing in the sense that it goes on continuously and in every phase of the lesson, and it is formative insofar as its purpose is forward-looking with timely feedback to learners and teachers and seeks to improve future learning as distinct from the retrospective nature of summative assessment (Greenwood et al., 2000). Walker and Reece (1997) stated, "Formative assessment is essentially diagnostic" (p. 20). Yet, it is a more complex matter than some may appreciate since it can be construed as a signaling system, and it has an important personal dimension (Yorke, 2005). Overall, formative assessment for learning is intended to improve learning and to inform teaching, but it can be entered into an achievement summary to serve as assessment of learning.

Assessment is an important aspect of promoting learning and teaching. Some assessment tasks cannot be separated from learning tasks. Assessment as learning assumes that providing students with opportunities to clarify or negotiate performance criteria and scoring rubrics can promote understanding of the desired outcomes and that some transfer or performance tasks will encourage students to enrich their understandings and processes. This is true for pre-service teachers as well as for primary and secondary school students.

There are various methods through which one can evaluate students' attainment of specified outcomes. Indeed, "Assessments take a variety of forms including but not limited to portfolios, performance tasks, essays and other performance-based written products, and when appropriate, select-response instruments such as multiple-choice and true-false assessments" (McConney & Ayres, 1998, p. 3). There are also various functions for assessment that university faculty members use to evaluate their students: ongoing feedback on draft teaching units and lesson plans where unsatisfactory performance has an impact on clinical experiences, final

grades, and program or course reviews within the university or teaching profession. Both formative and summative informative assessments are commonly used in teacher-education programs.

Formative assessment has the potential to directly improve learning because it takes place while instruction is in progress and can serve as a basis for providing timely feedback to increase student learning (Sadler, 1989; Shepard, 2003). Formative assessment strategies can help teachers to support deep student understanding while summative informative assessment “assists teachers to gather information about students’ developing understanding during every day whole-class conversations” (Ruiz-Primo & Furtak, 2007, p. 12). While formative assessment aims to monitor student learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning, the goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against a standard or benchmark (Carnegie Mellon University, n.d.). Taras (2001) suggested that summative assessment can be used for self-assessment that enables students to assess their own level of performance or achievement.

A variety of assessment methods enables all students to “demonstrate what they know and can do; student teachers must demonstrate ability and creativity in developing and using assessments” (McConney & Ayres, 1998, p. 31). Over the past two decades, various forms of assessment have emerged and are widely used to assess pre-service teachers’ learning, including tests, portfolios, group tasks, projects, writing tasks, and authentic performance tasks. For instance, researchers indicate that “Alternative forms of assessment such as e-portfolios have gained recognition in documenting students’ learning, as it is synchronous with both product and process” (Kabilan & Khan, 2012, p. 1007).

Little empirical research has been reported about pre-service teachers’ attitudes toward various assessment methods. This is even more the case with regard to students’ attitudes toward assessment related to the public (group negotiations) and private (internal reflections) phases of interactive-constructivist interpretations of learning (NRC, 2000). As Fletcher et al. (2012) stated,

Assessment in higher education serves multiple purposes such as providing information about student learning, student progress, teaching quality, and program and institutional accountability. Yet, little is known about faculty and students’ attitudes regarding different aspects of assessment that have wide-ranging implications for policy and practice in tertiary institutions. (p. 119)

This study explored the assessment preferences of female pre-service teachers enrolled in a Diploma of Education program in the Eastern Province of Saudi Arabia. The central research questions of this study were as follows:

1. Which of the two assignments (individual or group) was preferred by these pre-service teachers and why?
2. What are pre-service teachers’ perceptions of individual assignments?
3. What are pre-service teachers’ perceptions of group assignments?
4. Why did the pre-service teachers select their preferred assignment?
5. Do the assignments measure something different from the traditional midterm and final examinations?

Methodology

This two-part exploratory case study used a mixed-methods design that combined procedures of quantitative and qualitative data collection and analysis to provide better and localized insights about female pre-service teachers' perceptions of group and individual assessments in Saudi Arabia while providing potential generalizations to other contexts (Creswell, 2010). The mixed-methods approach was judged to be an appropriate research design by which to take advantage of the rich variety of information sources that could be used to reveal and justify trends or assertions flowing from the data. The first part consisted of the survey, which was comprised of four tasks and one question. The second part involved interviewing a random sub-sample of respondents to probe their rationale for their preferred choice.

General Context

The case study took place after the author taught two groups of students a course in the Faculty of Education at the University of Dammam in Saudi Arabia. Therefore, the context involved Saudi Arabia, a teacher education program, and a specific course.

Saudi Arabia and Teacher Education Programs

Founded in 1932, Saudi Arabia is a monarchy that wields significant political and economic influence as the birthplace of Islam and by virtue of its vast petroleum reserves (Blanchard, 2009). Higher education has recently become the focus of reform, and teacher preparation is one aspect that has received much attention from the Ministry of Higher Education (MoHE) and the Ministry of Education (MoE). Teacher preparation has undergone major development since the opening of the Scientific Saudi Institution for Teacher Preparation in Mecca in 1962. Later, in 1989, the MoE established 18 four-year postsecondary institutions, which were named Teachers Colleges (TCs). The goals of these TCs were to prepare students for initial entry into teaching, provide in-service teachers with ongoing professional development, conduct educational research, plan new programs, and cooperate with other national and international educational organizations. TC students were required to complete 27 credit hours in general academic courses, 45 credit hours in professional education courses, and 47 credit hours in major subject area courses (Ministry Agency of Teachers' Colleges, 2002). Professional education is concerned with all aspects of students' preparation for the teaching academy including teaching methods, curriculum, educational psychology, educational research, the Saudi educational system, classroom management, and school administration (Aljaber, 2002).

Course Context

Participants in this study were teacher candidates enrolled in the Curriculum Theories and Principles course as part of their Diploma of Education program; this half-year (i.e., one semester of 16 weeks), three-credit course required that they spend three hours per week in the classroom. The schedule allowed this course to address theoretical ideas before the practicum in

the second semester and to encourage the students to address practical issues that might arise during their practicum. Some of the topics or issues discussed in the course were theories of curriculum (classical and emerging), the structure of curricula in various disciplines, the history of K–12 curriculum development, and assessment and evaluation. Critical to this study and this course was the fact that the instructor (the author) attempted to model good assessment (i.e., evaluation) practices by addressing the functions of assessment and by requiring a variety of assessment tasks. This was done at some risk to the instructor since the assessments used differed from those commonly used in public schools and other university courses; on the other hand, they matched the anticipated assessments required by the recent curriculum reforms in schools.

Therefore, the method of evaluation used in the course was designed to illustrate the forms of assessment that could be used in the pre-service teachers' future teaching, to serve the accountability function for the institution, and to address the research questions of this study. Students were told on the first day of class that they were going to be evaluated based on the submission of individual and group assignments, as well as on a midterm test and a final examination. They were given the weightings, evaluation criteria, and detailed requirements of each assignment (Tab. 1).

| Assignment | Content | Percent of grade | Due |
|-------------------|-----------------------------|------------------|---------|
| Individual | Individual report (2 pages) | 10 | Week 6 |
| Midterm test | Multiple choice questions | 20 | Week 9 |
| Group | Group report (PowerPoint) | 30 | Week 12 |
| Final examination | Multiple choice questions | 40 | Week 17 |

Table 1: Evaluation Structure in Curriculum Theories and Principles

The Individual Assignment

The requirement of the individual assignment was that each student would submit a two-page critique of an article about either a textbook or a chapter in a book that is used in Saudi Arabia for the discipline and grade level that they intended to teach (Appendix A). Students were required to provide references that supported their analyses and opinions. Many of these student teachers had never before had the opportunity or been required to cite references.

The Group Assignment

The group assignment required that three to five students who shared the same teaching discipline (i.e., specialization) would form a group and analyze a textbook for any grade level, as well as a chapter or a topic, and apply the theoretical principles covered in the course (Appendix B). The second part of the assignment required that they present their analysis to the entire class.

Midterm and Final Examinations

The midterm examination consisted of 50 items (multiple-choice and open-ended questions) about the course topics. The final examination consisted of 100 items (multiple-choice and open-ended questions) focused on the entire course with an emphasis on the topics covered in the last part of the term. The midterm and final examinations were comprehensive and

inclusive of the course content about curriculum theories, levels of program design, the effect of social change on the curriculum, and connections to various educational philosophies.

Prior to assigning the assessment tasks to the students at the beginning of the course, they received detailed criteria on how they were to be evaluated; these criteria illustrate assessment as learning. In the middle of the second semester, these pre-service teachers had a 3-week practicum in a K–12 classroom to practice teaching in their subject (i.e., mathematics, science, Islamic studies, Arabic literature, or social studies). These assessment forms and practices were planned and implemented to enhance their assessment experiences and to illustrate the potential benefits of the various types of assessment. Students had an opportunity to try the ideas that they learned in class and to reflect on their experience in the classroom; it should be noted that some students had some prior experience teaching in private schools or as home tutors. One useful outlet for these assessment experiences and reflections was their teaching experience in the middle of the second term.

Validity of the Assignments and Examinations

All assignments and examinations were submitted to a panel of three faculty members with expertise in curriculum studies to assess the face validity of each and the alignment among them. The panel members were asked to state whether assignments and examinations measured both what the instructor stated in the course outline and the level of achievement of learning outcomes. This process was confidential and anonymous; the panel's comments were returned to the faculty secretary who emailed the responses to the researcher without any identification information.

One professor commented that (a) the individual assignment measured comprehension as well as some synthesis and judgment and (b) the group assignment measured the ability to set goals and to consider a future as a teacher of the textbook being analyzed. Another expert believed that (a) the individual assignment and scoring rubric emphasized critical thinking and the critique of pedagogical practices in current use and (b) the group assignment demonstrated the use of a progressive method to assess learning because they were asked to connect rather than just recall isolated ideas. Another expert believed that the instructional resources aligned with the principles of curriculum, instruction, and assessment promoted by the MoE. These experts indicated that the face validities of the assignments and examinations were reasonable for a low-risk study.

Participants

The participants in this research study were female students enrolled in a Diploma of Education program in order to either gain a certificate as K–12 teachers or pursue a master's degree in education. This study was conducted in two sections of a course with a collective enrollment of 118 students, of which 83 volunteered to participate in the study. All participants had an undergraduate degree in one of the following disciplines: computer science, biology, physics, chemistry, mathematics, Islamic studies, Arabic language and literature, history, geography, or English language and literature. They ranged from 26 to 45 years of age, and all came from the cities and small towns surrounding Dammam (the capital of the Eastern

Province). Approximately 60% had no teaching experience, and approximately 40% had prior experience teaching in private schools, which do not require a Diploma of Education.

Questionnaire

The research was based on the outcomes of a questionnaire containing four tasks and a question that were related to pre-service teachers' attitudes and preferences regarding group and individual assignments. The questionnaire asked them to list the advantages and disadvantages of each assignment and to state which of the two they preferred. It also asked them to give three reasons for finding one assignment to be more useful. The specific instructions/questions were as follows:

- List at least three advantages of the individual assignment.
- List at least three disadvantages of individual assignments.
- List at least three advantages of the group assignment.
- List at least three disadvantages of group assignments.
- Which of the individual or group assignments did you like best and why?

Validity of the Questionnaire

The validity of the questionnaire was explored through another panel of experts, a professor emeritus whose specialty is curriculum and instruction and three external educators. The professor was also asked to judge the clarity of the wording and the appropriateness of each item and its relevance to the main research questions being asked; the professor's feedback and directives were used to further refine the questionnaire. The three educators were asked to consider the following questions and provide feedback:

- What do you think the questionnaire measures? Does it represent assessment principles and the content of the course?
- Is it appropriate for the sample/population?
- Is the questionnaire comprehensive enough to collect the information needed to address the purpose and goals of the study?

Some parts of the questionnaire were changed in accordance with the feedback from the professor and educators.

The reliability of the questionnaire was explored through a pilot study of 30 students who were not part of the larger study. These responses were analyzed to determine the consistency between the stated advantages and disadvantages and the stated preferences. There appeared to be internal consistency among these respondents' weighted advantages-disadvantages and their preferred assignment and the justification for their choice. This result was taken as evidence for the questionnaire's reliability (internal consistency) in this low-risk study.

Data Collection Procedure

The researcher informed students about the rationale for the study and provided them with an information letter and consent form. These documents asserted that there would be

minimal risk in participating in the study because it ensured anonymity and privacy and because the results would not influence their course grade. Participants were made aware that they could withdraw from the data-collection process at any time. Participants were given the consent form prior to the data collection. They completed the questionnaire in the last week of classes, a process that required about 20–30 minutes. The researcher received and began to analyze the data only after the final examination and course grades were submitted. Of the 83 participants who provided consent forms, a random selection of 30 participants had a follow-up interview with the researcher. Informal discussions were held with each participant to provide enriched views on the assessment techniques, assignments, and preferences. The researcher made field notes of the discussions for later analysis.

Analysis of the responses to the completed questionnaire was begun with the determination of the descriptive statistics (percentages) for the students' preferred assignment. The respondents were then divided into four groups based on their preference: individual assignment, group assignment, neither assignment, or both assignments. Analysis of the open items and field notes from the interviews was done after reading and re-reading the short answers, using constant comparison and grouping them according to the themes that emerged, specifically, Advantages of Group Assignments, Advantages of Individual Assignments, Disadvantages of Group Assignments, and Disadvantages of Individual Assignments. Representative responses, quotes, and field notes were selected to illustrate the themes and to serve as evidence for the assertions related to each research question. The quotes were prefaced by the respondent's preference for the various assignments (individual, group, neither, or both).

The quantitative scores from the individual and group assignments were correlated with the midterm and final examination scores for the total population by means of the Pearson technique (Jain & Aggarwal, 2009); this enabled the determination of the association and shared variance among these measures. It was predicted that there would be low correlation coefficients and shared variances: first, because the assignments were designed to measure students' individual and collaborative abilities to think critically and to critique specific instructional resources' alignment with the principles of curriculum, instruction, and assessment promoted by the MoE; and second, because the course learning outcomes and examinations were designed to measure knowledge and understanding of curriculum theories, the structure of curricula in various disciplines, the history of K–12 curriculum development, and the principles of assessment and evaluation.

Results

The results are reported for each research question (RQ). Assertions about the RQ are indicated as tentative declarative statements (in **bold**), and evidence for the assertion is stated as numerical values or quotations, and the author's elaborations and discussion are provided in normal type.

RQ1. Which of the two assignments (individual or group) was preferred by these pre-service teachers and why?

The participants preferred the group assignment over the individual assignment based on their assessment of the advantages and disadvantages of the two assignments.

A majority (49 or 59%) of the students preferred the group assignment, while 25% (21) preferred the individual assignment, 14.5% (12) preferred both, and 1% (1) preferred neither. The

justifications for their preferences appeared to be contained in their personal perceptions of each assignment's advantages and disadvantages with respect to the following: context for completing each assignment (in isolation or through group collaboration), distribution of expertise and contributions, use of external resources, authenticity of the tasks, and celebration of task completion. The details of the advantages and disadvantages are addressed in the results of RQ2 and RQ3.

RQ2. What are pre-service teachers' perceptions of individual assignments?

The participants believed that the advantages of the individual assignment relate to personal factors and stimulating challenges and that the disadvantages relate to the lack of familiarity with the specifics of the assignment and time management.

Many students who preferred the individual assignment connected their preference with self-confidence. One student said, "It gave [me] a great deal of self-confidence.... I now can write a good argumentative report.... I understand my strengths and my weaknesses better." Another student stated, "The individual assignment gave me lots of confidence in my ability to analyze and critique an article ... the feedback was very constructive." About 20% of the pre-service teachers said, "I discovered my ability to write a critique and do a good job since I wrote the first individual [assignment]." According to another student, "This is the first time I learned how to write well with references ... I learned what it takes to write an academic article." Similar statements included: "I learned from my mistakes ... I learned to be concise; I learned to rely on myself and expand my knowledge; I learned to be professional in my writing; It allowed and taught me how to critique other subjects." Other responses related to broadening their perspectives about their academic abilities: "For the first time, I feel that I am a university student.... No one previously cared about my ability to critique and write ... I had been evaluated on my ability to memorize; I learned new skills ... important skills for a teacher; I learned how to cite references ... after graduating with my B.Ed. degree, no one cared to teach me how to cite; It made me able to grasp the connection in the entire course; I was evaluated objectively ... this is an important lesson for me as a pre-service teacher; I learned to look at issues from various perspectives."

Disadvantages were revealed by some participants' negative responses about the individual assignment, which focused on the challenges they experienced in working independently on a new task and in attempting to be creative. One student said, "The instructor should appreciate the individual differences and students' individual assignments' reflected that." Some participants (15%) indicated that the individual assignment required them to work outside their comfort zone: "The teacher asked for references and I am not used to academic writing." Others (20%) complained: "I didn't have experience in writing a report and I felt it was not fair to have this assignment"; 25% said, "The topic is too broad and I was scattered"; 35% indicated, "I could not find references ... I was not encouraged to do the assignment, and the professor didn't give an explanation"; 30% said that the "Grades were not fair ... the instructor didn't realize that it's our first time writing this type of work." Time demands to complete the assignment were problematic; 25% said, "The time given for this assignment – two weeks – was not enough; another 25% indicated, I was too pressured with time."

RQ3. What are pre-service teachers' perceptions of group assignments?

The majority of participants reported that the group assignment provided them a forum in which to collaboratively and confidently engage the content of the curriculum that they will teach in their practicum and that this was an opportunity for those who had never been required to present in a class.

Most of the participants indicated that the group assignment was a new experience, that they gained experience in presenting results within a collaborative context, and that this was not part of their previous studies at secondary or postsecondary levels. Many Saudi students graduate with their B.A. or B.Sc. without even once having spoken in their classes; this sometimes happens due to the large number of students in each class section for certain disciplines (sometimes exceeding 300 students per section in history, Arabic language and literature, and Islamic studies). According to one student, "I broke through the fear of facing an audience when I presented the assignment with my group ... I feel now that I can be a teacher. Another participant said, "The group presentation was the best part because it made a difference for how I feel about my ability to present and discuss my points."

Some participants indicated that the group assignment helped them understand the advantages of collaboration: "The group assignment was a forum for collaboration and helped build new ideas amongst the group ... and exchange of experiences." Some discovered their ability to lead, which is an important aspect of being a teacher: "Through group work I realized that I am a leader because my ability for problem solving helped maintain the group spirit." One student suggested, "It taught us how to build relationships to succeed.... It taught us how to organize and format the group's point of view.... I learned how to listen and appreciate colleagues' perspectives." Other students commented: "Collective effort made me able to see how teachers work and succeed.... It taught me how respecting obligations and rules are important in group work.... It taught me to become patient with others' points of view; I learned how to respect others' opinions.... It allowed us to delve into the philosophy that curricula are built upon." The group assignment was also a catalyst for social networking: "Before the group assignments, I barely knew my colleagues' names."

Some participants believed that the group assignment required them to demonstrate creativity and think outside the box. More than 40% said that they became better critical thinkers: "It helped me promote my critical-thinking skills.... I am able to reach out to those who are different from me; Group assignments promoted my critical-thinking skills; Through the assignment, I learned to dig deeper into issues related to the course." The course was also a stimulus for the acquisition of research skills: "I became better at collecting data from credible sources.... My research skills improved significantly."

One interesting aspect of the group assignment was that the students became familiar with the curriculum they would eventually teach in school. The assignment encouraged them to explore the curriculum and learn its flaws, weaknesses, and strengths. According to one student, "I enjoyed exploring and looking at the curriculum that I will teach later on from a holistic point of view which happened with the group assignment.... We collaborated to frame innovative ideas about the curriculum we will teach and that was important." Another student said, "The group assignment gave our group a confidence in critiquing the history curricula and textbook, which was new to us.... We were able to learn many new things we were unable to know about before taking the course and doing the course assignment." The group assignment helped them to appreciate the individual assignment since many of them initially rebelled against writing reflections, critiquing, and analyzing. Many said that they had never before been asked to do such work; however, they expressed their appreciation afterwards.

While the majority of participants saw the merit in the group assignment, some found that there were disadvantages in terms of time management within the group, the required level of creativity, and an alleged lack of support or resources. Many students' concerns about time management were related to the need to consider all the members' schedules and time demands

and to the fact that they were better prepared to write traditional examinations than participate in this new method of assessment. For instance, “The time after and between lectures and classes was [limited, and it was difficult for] students to meet with each other; The time was too short; We are unable to contact one another.... We have a busy schedule.” One complaint was, “The assignment was close to exam time so this did not give us the opportunity to do our best.”

Some participants said that the reason they did not like group work was the fact that some individual members did not manage their time properly: “Some students are procrastinators, which caused many problems within the group.... Dependency of the group on one member to do the work was one of main issues I faced with the group assignment. Some students had a misunderstanding of what group work entails and that it requires all members’ equal participation.” Another participant observed, “For many of us, it’s the first time we worked on a group assignment so we do not know how to divide the work and collaborate with each other.” Problems were sometimes encountered with respect to leadership and collective decision-making: “Some people in the group wanted to control everything and expressed no respect for others’ time, perspectives and needs.... Selfishness was an issue for some members of the group; One person wanted to control the group ... and impose her views on the rest.... It was a big issue.” Some students were unable to appreciate the value of this approach because they focused exclusively on achieving the highest possible individual grade; they expressed their dissatisfaction with the group grade and, hence, with the assignment: “There was no respect in grading for individual differences.... Some people in the group didn’t do what they had to and threw their responsibilities on others.... This made the group assignment unfair.”

RQ4. Why did the pre-service teachers select their preferred assignment?

These participants justified their preference for the group assignment because, unlike the individual assignment, it promoted collaborative and cooperative learning, the distribution of expertise and contributions, the use of external resources, and taking of steps to ensure the authenticity of teacher work, such as carefully reading and understanding the curriculum they would be teaching, and presenting their work to the larger group.

A large percentage (59%) of the participants reported that the group assignment was superior to the individual assignment but 59% selected it as their preferred assignment. Table 2 summarizes the theme and percentage response patterns for students’ justification of their assignment choices. Both assignments were perceived as having advantages over the traditional assessment methods used in their university education; at the same time, both assignments involved new expectations and difficulties. An analysis of the advantages offset by disadvantages of each assignment partially demonstrates the basis for these participants’ preferences (Appendix C). They found that group assignments made them better able to enjoy their interpersonal experiences of exchanging knowledge with one another.

| Advantages of assignments | | Disadvantages of assignments | |
|--|---|--|--|
| Group | Individual | Group | Individual |
| Gain new experience (40%) | Develop self-confidence (30%) | Time-management issues (40%) | Burden to look up sources in the library (15%) |
| Gain a better understanding of the advantages of collaboration (40%) | Expand horizons and learn how to perform research (20%) | Reluctance to learn (20%) | Short time given for doing an assignment (20%) |
| Taught the importance of a strong work ethic (20%) | | Miscommunication suffered by some students with other group members and personality issues (20%) | |
| Was a vehicle for social networking (20%) | | Group work-ethic issues (20%) | |
| | | Lack of library resources (20%) | |

Note. Some category percentages exceed 100% as respondents offered more than one response.

Table 2: Summary of Theses and Responses (%) of Pre-service Teachers' Justifications for Assignment Preference

RQ5. Do the assignments measure something different than the traditional midterm and final examinations?

The individual and group assignments measured something different than the midterm, the final, and the combined examinations.

The individual and group assignments and rubrics were designed to measure the ability to critique a current practice or educational theory, to apply this knowledge, and to analyze and discuss the curriculum or a unit in the intended teaching level of schooling and discipline. The group assignment and rubric were designed to develop and measure presentation skills and the ability to work in a group in addition to the achievement of the shared outcomes. The correlation analyses of the assignment scores and of the midterm, final, and combined examinations revealed nonsignificant correlation coefficients and very small shared variances as had been predicted (Tab. 3).

| Examination | Individual assignment* | |
|-----------------|------------------------|------------|
| Midterm score | -.07 (.005) | .14 (.020) |
| Final score | -.04 (.002) | .03 (.001) |
| Combined scores | -.13 (.017) | .28 (.088) |

*Pearson product correlation coefficients and shared variance

Table 3: Correlation Coefficients and Shared Variance between Assignment and Examination Scores for Total Enrolment (N = 118)

These results indicated that the scores on the group assignment (Week 12) were not strongly associated with the scores on the midterm (Week 9), the final (Week 17), and the combined examinations. Furthermore, the shared variances were very small, suggesting that the group assignment measured something different from the content-oriented examinations. The scores on the individual assignment (Week 6) were not highly correlated with the midterm (Week 9), the final (Week 17), and the combined examinations. Likewise, they revealed very small shared variances, suggesting that the individual assignment and the examinations measured

different things. Post-hoc correlations between the midterm and final examination scores revealed a correlation coefficient of .64 ($p < 0.001$), which was consistent with expectations because there was a common item structure (multiple choice) and a focus on knowledge about the core ideas of the course; however, the emphases focused on the first or last half of the course. A post hoc correlation between the two assignments revealed a surprisingly low, but nonsignificant correlation coefficient of .17 ($p = .22$).

Discussion

Concerned professors working in the field of teacher education are placed in a difficult position when it comes to evaluation. They have to fulfill rigid expectations for accountability and grading set by the university, but they also want to demonstrate more contemporary and authentic assessment techniques in order to increase the likelihood that these future teachers will move away from simply using paper-pencil examinations and consider innovations that more closely reflect the higher-order learning outcomes sought by modern curricula. The elementary and secondary curricula in Saudi Arabia have changed; they now encourage higher-level learning outcomes (e.g., critical thinking, problem solving) and student-oriented learning. The central intention of the design of the Curriculum Theories and Principles course was to promote authentic teaching and assessment practices that align with the theories, principles, and local applications of contemporary curricula in Saudi Arabia. This intention was implemented with (a) knowledge of the risks involved, (b) the realization that many of the students would not have had prior experience with the required learning tasks, and (c) the belief that these tasks are unrealistic in light of what is occurring in elementary and secondary school classrooms. Such tensions were assumed to be part of planned change where established curricular and instructional practices are destabilized and innovative practices are introduced.

The primary purpose of this study was to highlight the perceptions (attitudes, beliefs, and values) of pre-service teachers toward group versus individual assignments. A majority (59%) of the student teachers surveyed indicated that they preferred group work, while about 25% preferred the individual assignment, 14.5% preferred both assignments, and one respondent preferred neither assignment. Table 3 provides the correlation coefficients and shared variance between the assignment and examination scores for the total enrolment ($N = 118$), which is assumed to be similar to the respondents ($n = 83$); these results suggest that the assignments measured something different than merely the degree of recall of content.

The scheduling of the two assignments might have had an effect on the feedback received; the timing of the first assignment, which was early in the term, caused some dissatisfaction among the students. On the other hand, when the group assignment was given, the feedback was generally positive and the results improved significantly because students had a better understanding of the style of instruction and the requirements of academic writing. The weightings of the assignments (the individual assignment was 10% and the group assignment was 30% of the course grade) could have been a factor affecting the students' inclination to favour the group over the individual assignment. Unfortunately, the students did not realize that the lower weighting on the individual assignment allowed them to focus on a new experience with minimal risk (10%) and that it provided an opportunity to obtain formal feedback and suggestions on their academic writing early in the course. This allowed them to practice and seek help prior to the group assignment and presentation.

The general consensus is that students tend to focus more and do better on assignments with higher weightings, which is the case in this study. It has been observed that students in this study were similar to those enrolled in writing-intensive courses, especially regarding lack of prior academic writing experience and tutoring (Yore, Bisanz, & Hand, 2003).

Theoretical and Practical Implications

The perceptions of these pre-service teachers toward group and individual assignments involved a range of attitudes and beliefs about effective teaching and assessment practices and about what is feasible in classrooms. The majority expressed interest in the group assignment because it helped them to engage with other students, negotiate and co-construct understandings, and exchange knowledge by dialoguing and presenting ideas about their teachable disciplines. The respondents perceived these tasks as constituting authentic teacher work and as opportunities to experience learning tasks and situations that could be applied in their future teaching.

Planned change, educational reform, and implementation of innovations in education are filled with tensions for students, parents, administrators, and teachers—especially given the impact of traditions, transferred experiences, established routines, and fear of the unknown. Based on these participants' responses, it seems that some have reservations about participating in the changes in educational assessment and in the wider reform of education. Nevertheless, pre-service and practicing teachers must be involved in debates about educational innovation in order to develop coping strategies and flexibility necessary to address these tensions. The Curriculum Theories and Principles course is an appropriate context in which to simulate change and associated tensions for pre-service teachers. The results of this study demonstrate that these assignments captured the dynamics and context of change and created a supportive environment where students could achieve the learning outcomes of the course and develop the coping strategies necessary to handle change in their future teaching. Without this experience, they would have been much less likely to fully realize the importance of being engaged with the content and dynamics of curricular change, of experiencing innovative teaching practices and learning tasks, and of encouraging their future students to reach this level of engagement. As Lee (2005) explained,

Expectations for teachers are high in today's educational reform and policy agendas – teachers need to be experts in one or more specific subjects. They also need to be prepared to effectively handle the challenges of growing diverse populations of students.... Teachers are also expected to manage the far-reaching changes that are taking place in an out of schools. (p. 23)

In educational reform, teachers are required to be the agents of change and not just the targets of change. Teachers must assume leadership roles, develop and present implementation plans, and carry out the desired innovations. Thus, they need supportive, low-risk opportunities to experience leadership and to develop the associated communication and organizational abilities. It is not typical that pre-service and practicing teachers in their teacher-education and professional-development programs have opportunities to assume leadership roles and to participate in group assignments. The results of this study provide evidence from a pedagogical standpoint that pre-service teachers have great potential to benefit from group work.

It seems that pre-service teachers who are reluctant to challenge their perceptions of traditional assessment methods need to reflect again on the importance of embracing new methods of learning and teaching, including new methods of assessment. Assessment has been viewed as a stimulus for reform and innovation (assessment-driven change). Recently, greater attention has been given to assessment *of* learning (accountability), assessment *for* learning (which empowers learning and informs teaching), and assessment *as* learning (which entails an alliance between learning tasks and assessment tasks). Both assignments, including their scheduled occurrence within the course and their associated scoring rubric, were designed to address assessment of, for, and as learning. Unfortunately, these features are not generally made transparent or explicit for pre-service teachers.

Most of the opportunities and risks regarding external factors were anticipated in the design of the assignments. Concerns about library resources should become less of a concern as the students learn to use Internet-accessible digital resources rather than hard-copy books and other traditional sources. It is possible that some students were using the same reference materials, which compounded the concerns about library resources. Furthermore, many students complained that there was a lack of time and, specifically, that this impeded their ability to work on either the individual or group assignment.

Student evaluations of their teachers to measure the effectiveness of teaching methods are a significant element that should be considered in designing assignments and course syllabi. Lower weightings for individual and group assignments might be advisable since the smaller percentages relieve some of the pressure of these new assignments; on the other hand, the weightings still need to reflect the amount of work required. Whole-class presentations with clear assignment descriptions and scoring rubrics are important steps to prepare students so that they are not be surprised by novel assignments. Furthermore, by having the individual essay first, the students could focus on their academic writing skills rather than divide their attention among collaboration, negotiation, leadership, and writing—all required elements of the group assignment. Another point, related to students commuting to campus, is the added demand in terms of time management and scheduling group meetings. The class time was only 3 hours per week, which made it difficult for students to meet during class. It would be useful to identify ways to build assignment time into the scheduled class time in order to reduce outside time demands and scheduling problems for nonresidential students.

The pre-service teachers surveyed for this study indicated that timing and time management were issues for most of them. Previous studies have shown that problem solving is an important coping strategy that can reduce or even prevent stress by enabling a person to better manage daily problematic situations and their emotional effects (D’Zurilla & Sheedy, 1991). Thus, choosing the appropriate time frame for assignments is of paramount importance, especially given the fact that the majority of these pre-service teachers had not been exposed to academic writing assignments. They were used to being evaluated and assessed through traditional evaluation methods such as quizzes, tests, and final examinations.

In light of the results obtained, it is recommended that other researchers conduct related studies that measure the attitudes of students—and of pre-service teachers in particular—toward the various methods of assessment used in higher education. Students should be given more scope to choose the ways in which they are assessed, and they should be encouraged to try various methods to assess their own learning outcomes and to experience for themselves the results of their learning.

Reforming education from within by improving teacher-preparation pedagogy is the first step toward achieving progress in elementary and secondary school education. Various studies have criticized the education system in Saudi Arabia and, in particular, the fact that it generally does not promote students' abilities to think and analyze. Indeed, "Rote memorization of basic texts continues to be a central feature of much of the educational system of Saudi Arabia even today" (Rugh, 2002, p. 40). Thus, an important aspect of education reform in Saudi Arabia is having pre-service teachers analyze, present, argue, and think critically through assignments like those used in this study. Teacher-education programs should move beyond traditional styles of instruction—based on memorization, lecturing, and testing the recall of information—to the encouragement of progressive thinking and knowledge construction. Extensive new measures are needed to ensure that pre-service teachers become more comfortable with the new approaches.

This study indicates that teachers and policymakers should consider students' preferences because there is a positive connection between students' attitude toward a topic and their performance. Struyven, Dochy, and Janssens (2005) indicated that there was a positive relationship between students' preferred activities and high performance; thus, it is important to know what students prefer and enjoy so that they can achieve good results. When teachers know students' attitudes toward a particular type of assessment, they are in a much better position to build strategies to support positive attitudes among students toward their courses. McKeachie (1984), Race (2009), and Spencer and Schmelkin (2002) have suggested that teachers should ascertain their students' perspectives about the ways in which they should be evaluated and that this knowledge would decrease the stress level associated with the performance of the assignments.

Future research should explore the application of new methods of assessment and the documentation of pre-service teachers' perceptions (e.g., attitudes, beliefs, and values) toward these methods. These studies could explore gender differences by documenting male pre-service teachers' perceptions of the assessment used in this study and other forms of assessment. This would be important in order to determine if it is possible to replicate the trend observed in this small sample. Meaningful assessment has to reflect the desired learning outcomes, purposes, and overall reform strategy of the particular education system. Indeed, "[assessment], instruction and curriculum need to be aligned in order for educational reform to be successful" (Ruiz-Primo & Furtak, 2007, p. 79). By giving pre-service teachers the opportunity to be part of the educational reform that moves beyond traditional assessment methods, these individuals will be in a better position to integrate innovative techniques into their future instruction with a view to meeting the goals of the new curricula and realizing the goals of Tatweer and all the developmental plans that are underway by the MoE and the MoHE.

Some students' comments about the group assignment (i.e., it was their first opportunity to develop or demonstrate their leadership and communication abilities) highlighted the lack of classroom-level leadership for reforms among practicing teachers. This is one significant aspect that the MoE and MoHE should consider when developing programs for preparing teachers or when providing professional development for practicing teachers.

Closing Remarks

This study aimed to explore Saudi pre-service teachers' perceptions of the forms of assessment with which they were evaluated while taking courses in the first semester of their

Diploma of Education program. One of the study's limitations is the implications relating to the fact that all participants were female because of the fact that the researcher is a female and thus easier to obtain data from females in a gender-segregated society. The author's recommendation that researchers conduct related studies has considerable merit in addressing this concern. Moreover, women's voices need to be heard in many developing countries trying to more fully use their human resources.

The results revealed that the majority prefer group assignments to individual assignments because the former give them the opportunity to exchange knowledge, to connect with each other on a personal level, and to gain a more intimate knowledge of their teaching area. This group work enabled the student teachers to practice their skills within the group first because one requirement was to collaborate with others who are intending to teach the same subject. The results of this study are not generalizable because of the small student sample and unique context; however, it is expected that one could draw tentative conclusions about the preferences of pre-service student teachers regarding various assessment methods and styles.

References

- Alghamdi Hamdan, A., & Alsalouli, M. (2012). Saudi elementary school science teachers' beliefs about teaching science in the new millennium. *International Journal of Science and Mathematics Education*, 11(2), 501-525.
- Aljaber, J. (2002). *Grades 7-12 preservice teacher preparation science program in Riyadh Teachers College in the Kingdom of Saudi Arabia* (Unpublished doctoral dissertation). Indiana University, Bloomington, Indiana, USA.
- Bell, B., & Cowie, B. (2001). *Formative assessment and science education*. Dordrecht, The Netherlands: Kluwer.
- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education*, 5, 7-74.
- Blanchard, C. M. (2009). *Saudi Arabia: Background and U.S. relations* (CRS Report for Congress). Washington, DC: Congressional Research Service.
- Bridgeman, B. (1992). A comparison of quantitative questions in open-ended and multiple-choice formats. *Journal of Educational Measurement: Issues and Practice*, 29, 253-271.
- Carifio, J., & Kermis, W. (1990, February). *Some findings on preparing teachers attitudes towards tests*. Paper presented at the annual meeting of the Eastern Educational Research Association, Tampa, FL.
- Carnegie Mellon University. (n.d.). *What is the difference between formative and summative assessment?* Pittsburgh, PA: Eberly Center for Teaching Excellence. Available from <http://www.cmu.edu/teaching/assessment/basics/formative-summative.html>
- Cochran-Smith, M. (2003). Assessing assessment in teacher education. *Journal of Teacher Education*, 54(3), 187-191.
- Creswell, J. (2010). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
- D'Zurilla, T. J., & Sheedy, C. F. (1991). Relation between social problem-solving ability and subsequent level of psychological stress in college students. *Journal of Personality and Social Psychology*, 61(5), 841-846.

- Fletcher, R. B., Meyer, L. H., Anderson, H., Johnston, P., & Rees, M. (2012). Faculty and students' conceptions of assessment in higher education. *Higher Education*, 64(1), 119-133.
- Greenwood, L., Cole, U. M., McBride, F. V., Morrison, H., Cowan, P., & Lee, M. (2000). Can the same results be obtained using computer-mediated tests as for paper-based tests for national curriculum assessment? In R. Robson (Ed.), *Proceedings of the International Conference on Mathematics/Science Education & Technology M/SET 2000* (pp. 179-184). Retrieved from ERIC database. (ED448683)
- Huxham, M., Campbell, F., & Westwood, J. (2012). Oral versus written assessments: A test of student performance and attitudes. *Assessment and Evaluation in Higher Education*, 37(1), 125-136.
- Jain, T., & Aggarwal, S. (2009). *Quantitative techniques (for Basis Business Analysis)*. New Delhi, India: F.K. Publications.
- Kabilan, M. K., & Khan, M. A. (2012). Assessing preservice English language teachers' learning using e-portfolio: Benefits, challenges and competencies gained. *Computers and Education*, 58(4), 1007-1020.
- Lee, H.-J. (2005). Understanding and assessing preservice teachers' reflective thinking. *Teaching and Teacher Education*, 21(6), 699-715.
- Liebars, C. (1999). Journals and portfolios: Alternative assessment for pre-service teachers. *Teaching Children Mathematics*, 6(3), 164-169.
- Mahfzah, S. (1999). itejहत talabat aldbloom Alalm fee Altarbya naho Alektebarat Aladea wa ketebat alawrag albahtea [Diploma students in Education attitudes toward examinations or writing a research paper]. *Social Affairs*, 63(16), 4156.
- McCloskey, D. I., & Holland, R. A. (1976). A comparison of student performances in answering essay-type and multiple-choice questions. *Medical Education*, 10(5), 382-385.
- McConney, A., & Ayres, R. R. (1998). Assessing student teachers' assessments. *Journal of Teacher Education*, 49(2), 140-150.
- Mckeachie, W. J. (1984). Spatial strategies: Critique and educational implications. In C. D. Holley & D. F. Dansereau (Eds.), *Spatial learning strategies: Techniques, applications, and related issues* (pp. 301-312). San Diego, CA: Academic Press.
- Ministry Agency of Teachers' Colleges. (2002). *Teachers Colleges: Students guide handbook*. Riyadh, Saudi Arabia: Ministry of Education.
- Newton, P. (2007). Clarifying the purposes of educational assessment. *Assessment in Education*, 14(2), 149-170.
- Race, P. (2009). *Designing assessment to improve physical sciences learning*. Unpublished manuscript, University of Hull, Hull, England.
- Ramsden, P. (2003). *Learning to teach in higher education* (2nd ed.). London, UK: Routledge.
- Rugh, W. A. (2002). Education in Saudi Arabia: Choices and constraints. *Middle East Policy*, 9(2), 40-55.
- Ruiz-Primo, M. A., & Furtak, E. M. (2007). Exploring teachers' informal formative assessment practices and students' understanding in the context of scientific inquiry. *Journal of Research in Science Teaching*, 44(1), 57-84.
- Sadler, D. R. (1989). Formative assessment: Revisiting the territory. *Assessment in Education*, 5, 77-84.
- Shepard, L. (2003). Reconsidering large-scale assessment to heighten its relevance to learning. In J. M. Atkin & J. E. Coffey (Eds.), *Everyday assessment in the science classroom* (pp. 121-146). Washington, DC: National Science Teachers Association Press.

- Spencer, K. J., & Schmelkin, L. P. (2002). Student perspectives on teaching and its evaluation. *Assessment & Evaluation in Higher Education*, 27(5), 397-409.
- Struyven, K., Dochy, F., & Janssens, S. (2005). Students' perceptions about evaluation and assessment in higher education: A review. *Assessment & Evaluation in Higher Education*, 30(4), 331-347.
- Taras, M. (2001). The use of tutor feedback and student self-assessment in summative assessment tasks: Towards transparency for students and for tutors. *Assessment & Evaluation in Higher Education*, 26(6), 605-614.
- Tatweer Education Holding Company. (2012). *Homepage*. Retrieved from <http://www.tatweer.sa/EN/index.html>
- Ucar, S. (2012). How do pre-service science teachers' views on science, scientists, and science teaching change over time in a science teacher training program? *Journal of Science Education Technology*, 21(2), 255-266.
- United States National Research Council. (1999). *The assessment of science meets the science of assessment: Summary of a workshop*. Washington, DC: National Academies Press.
- United States National Research Council. (2000). *How people learn: Brain, mind, experience, and school—Expanded edition*. (J. D. Bransford, A. L. Brown, & R. R. Cocking, Eds.). Washington, DC: National Academies Press.
- United States National Research Council. (2001). *Knowing what students know: The science and design of educational assessment*. (J. W. Pellegrino, N. Chudowsky, & R. Glaser, Eds.). Washington, DC: National Academies Press.
- Valli, L., & Rennert-Ariev, P. (2002). New standards and assessments? Curriculum transformation in teacher education. *Journal of Curriculum Studies*, 34(2), 201-225.
- Walker, S., & Reece, I. (1997). *Teaching, training & learning: A practical guide*. Gateshead, UK: Athenaeum Press.
- Yore, L. D., Bisanz, G. L., & Hand, B. M. (2003). Examining the literacy component of science literacy: 25 years of language arts and science research. *International Journal of Science Education*, 25(6), 689-725.
- Yorke, M. (2005). Increasing the chances of student success. In C. Rust (Ed.), *Improving student learning 12: Diversity and inclusivity*, (pp. 35-52). Oxford, UK: Oxford Brookes University Centre for Staff and Learning Development.
- Zeidner, M., & Bensoussan, M. (1988). College students' attitudes towards written versus oral test of English as a foreign language. *Language Testing*, 5(1), 101-121.

Appendix A: Individual Assignment Requirements

1. The report must be in your own language and should specify the reference(s) from which the information is taken. If you cut and paste a sentence, you must use quotation marks and write the author, year, and page number in brackets in the text after the quotation.
2. You are required to choose any article, newspapers or academic, that discusses curriculum or a unit in your teachable textbook and give your analysis of the article in no more than 2 pages.
3. The report must:
 - use Times New Roman, font size 12
 - have 1.5 space between lines
 - use margins of 2.5 cm
 - be 2 full pages in length (not including the reference page)
4. The report must use the following headings:
 - **Introduction**
Provide a general idea regarding what you have in the body of this essay. Also explain the importance of this assignment.
 - **The issue: Background**
Introduce the ethical issues related to the workplace in general, such as fairness and honesty. Explain how such ethics can help you and the company you work for as well as its customers.
 - **Analysis and Suggestions**
Discuss 5 ethical challenges that you may face in the workplace. Also explain why they are challenging to you and how you will handle them.
 - **Conclusion**
Include a summary of the key points from the body paragraphs and say how these key points answer the assignment.
 - **References**
Include at least 3 references. The references can be from books, newspapers, or the Internet. You must cite the author and year in the text of the essay. Also, you must list the author, year, article or book title, and publisher under References at the end of the essay.

Assessment Criteria

| CRITERIA | ASSESSMENT RUBRIC FOR WRITTEN REPORT | SCORE |
|--------------|---|-------|
| Introduction | Contains thesis statement, states why assignment is important, outlines the body topics | 2% |
| Body | All the assigned body topics are contained in the assignment, examples are detailed, structure of essay is logical, report is correct length, no cut and pasting, references are cited in essay | 8% |
| Conclusion | Conclusion summarizes the key points from the body, answers the thesis statement | 2% |
| Mechanics | Punctuation and spelling and capitalization are correct, words are well chosen, writer uses own words | 2% |
| References | Contains 3 relevant references | 1% |
| TOTAL | | 15% |

Appendix B: Group Assignment Requirements

PowerPoint Presentation

1. Time limit: 5 minutes
2. PowerPoint: 7 slides with 4 or 5 bullets on each slide
3. Prepare attractive slides that add to your presentation. Use a picture, table, graph or diagram on most of the slides.
4. Explain each key point on each of your slides
5. Include the following slides in your presentation:
 - Slide 1: The title of the presentation
Title slide with the assignment name, students' names, and IDs
 - Slide 2: Outline
Outline of the slides in your presentation
 - Slide 3: Background of the Curriculum
Background and history of the curriculum being explored, its founding year, its main theme, the chapter being explored or critiqued
 - Slide 4: Analysis of the curriculum or the unit being studied
Analysis of the curriculum or the unit, its learning outcomes, the activities used, and the homework suggestion given
 - Slide 5: Challenges to reform and improve the unit or the curriculum
Give brief descriptions of challenges that would be faced if changes were made on the curriculum and areas of improvement, if any
 - Slide 6: Conclusion
 - Slide 7: Summary
Summarize the key points. Do not simply cut and paste the Outline slide here.

Written Report

1. The report must use your own language and should specify the reference(s) from which the information is taken. If you cut and paste a sentence, you must use quotation marks and write the author, year, and page number in brackets in the text after the quotation.
2. Choose a unit or more in your teachable textbook and analyze it by considering the learning outcomes, the activities provided for students, and ways in which to improve the unit to better support students' learning.
3. The report must:
 - use Times New Roman or Arial, font size: 12
 - have a space of 1.5 between lines
 - use margins of 2.5 cm
 - be 2 full pages in length (not including the reference list)
4. The report must use the following headings:
 - Introduction
Include a clear thesis statement, justify the importance of the assignment, outline what topics the report will cover
 - Background of the curriculum under investigation
Briefly describe the textbook or the curriculum under investigation, its history, its founding year, its main outline.
 - Analysis and evaluation of the curriculum under investigation
Analyze the learning outcomes of the curriculum or the text book being considered and provide an overall evaluation of the curriculum or text. Give specific examples.
 - Ways to improve the unit or the curriculum
Give brief descriptions of challenges that would be faced if changes were to be made on the curriculum and areas of improvement, if any. Give specific examples.
 - Conclusion
Include a summary of the key points from the body paragraphs, and say how these key points answer the assignment.

- References

Include at least 3 references. The references can be from books, newspapers, or the Internet. You must cite the author and year in the text of the essay. Also, you must list the author, year, article or book title, and publisher under References at the end of the essay.

Assessment Criteria

| CRITERIA | ASSESSMENT RUBRIC FOR POWERPOINT PRESENTATION | SCORE |
|--------------------------|--|-------|
| Outline | Outline slide presents an overview of the presentation topics | 2% |
| Organization/ Content | Slides are well organized and arranged in a systematic fashion, all the assigned topics are covered, each bullet point is explained with specific examples | 10% |
| Delivery | Speaks clearly and confidently, looks at audience, does not read each slide word by word, keeps hands out of pockets | 3% |
| Slide appearance | Slides are attractive to look at with easy-to-read font, graphics, colors, headings, and sufficient white space | 3% |
| Conclusion | Final slide summarizes the key points | 2% |
| TOTAL | | 20% |

| CRITERIA | ASSESSMENT RUBRIC FOR WRITTEN REPORT | SCORE |
|--------------|---|-------|
| Introduction | Contains thesis statement, states why assignment is important, outlines the body topics | 3% |
| Body | All the assigned body topics are contained in the assignment, examples are detailed, structure of essay is logical, report is correct length, no cut and pasting, references are cited in essay | 9% |
| Conclusion | Conclusion summarizes the key points from the body, answers the thesis statement | 2% |
| Mechanics | Punctuation and spelling and capitalization are correct, words are well chosen, writer uses own words | 3% |
| References | Contains 3 relevant references | 3% |
| TOTAL | | 20% |

Appendix C: Selection of Responses to Justify Individual Assignment and Selection of Responses to Justify the Group Assignment

| Pro Individual Assignment | Pro Group Assignment | Both Assignments |
|---|---|--|
| <ul style="list-style-type: none"> • The advantages were individualistic. • I preferred it because I like competition with others. • It made me able to work on my own ... I don't prefer group work. • The responsibility is on me and I don't have to chase others to finish the work. • I'm free in the work and no one can slow me down or pressure me. • I'm usually shy and nervous when I present, which was part of the group work. • Students don't understand the culture of group work ... one dumps the work on the other. • I learned on my own how to write a critique ... cite references.... It was an important training for me. • I don't want people to take advantage of me. • It's better to stay out of conflict with others. | <ul style="list-style-type: none"> • I got used to the evaluation style of the instructor ... it was better for me the second time. • It was a great experience for me to critique and analyze a curriculum. I am going to teach.... Now I know the issues that I have to deal with. • The group was better because it allowed me to know my colleagues' ability to present and to give their best analyses in front of the group. • I enjoy group discussions. • I enjoy practical discussion-based homework. • The topic was why I liked the group discussion. • It's better to collaborate. • When we worked in the group, we were the same specialty and thus it was important for my professional growth. • I enjoyed listening to my colleagues' presentations about their critique of the curriculum. • The work is divided amongst the group. • The work is divided amongst the group. • It was faster to finish because each group member took part. | <ul style="list-style-type: none"> • Clarity was the main factor across the two assignments. • Both were needed to improve our skills ... group skills and individual skills. • I benefited from both in learning new skills. • The two were turning points in my learning curve. • Both made me able to grasp the course and understand its concepts better. • Both made me a better student: The individual gave me confidence and the group gave me the protocol of collaboration and the group spirit ... and the encouragement to present my ideas in everyone's presence when I presented. |